

REMARKS

The Office Action of December 23, 2008, has been carefully studied. Claims 1 and 3-30 currently appear in this application. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration and formal allowance of the claims.

Rejections under 35 U.S.C. 112

Claims 1 and 3-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that it is unclear if the whole BP range must be lower than the whole MP range. In claim 1, 9th line from the end and claims 3, 5, and 9, there is said to be no antecedent basis for "mixture of polyolefin waxes."

This rejection is respectfully traversed. Claims 1 and 10 have been amended to recite that the melting point of the polyolefin wax or the mixture of polyolefin waxes is the differential scanning calorimetry (DSC) peak melting point. This DSC peak melting point is defined in the specification as filed at page 20, lines 5-12 of the published PCT application. This paragraph forms the basis for this amendment and further clarifies how to interpret the melting point. To further clarify the subject matter of the claims, all references to the boiling point ranges and melting point ranges have been deleted, so that the claims 1 and 10 now only state that the point of the liquid

phase is lower than the DSC peak melting point of the polyolefin wax of the mixture of polyolefin waxes.

Claim 1 has been amended to delete "the components in" as being redundant, and thus there is no support for the recitation of "the mixture of polyolefin waxes" in claims 3, 5 and 9.

Art Rejections

Claims 1, 3-21, 23, 24, 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregory, US 4,317,755.

This rejection is respectfully traversed.

Gregory teaches a coating composition comprising an aqueous vehicle having therein

- (a) a self-polishing, film-forming polymeric coating agent selected from the group consisting of emulsion coatings, alkali-soluble coatings, solution coatings and mixture thereof; and
- (b) an emulsified hydrocarbon solvent.

Gregory defines the term "self-polishing" at column 2, lines 48-49, as referring to systems "which dry from an aqueous carrier to a glossy finish." The composition may contain an emulsifiable polyethylene or polypropylene wax. (column 6, lines 65-68), and the composition may further comprise "0-10% by weight of a polyhydroxy polyether, a lower alkanol or a high-boiling alcohol" (column 7, lines 45-47). This composition is applied to a surface, followed by drying (column 8, lines 55-64). No buffing step is mentioned because the sealing composition is said to be self-polishing.

The coalesced wax particles on a surface and a method of treating a surface as claimed herein require a heating treatment to coalesce the wax particles. In contrast to this, the coating of Gregory is self-polishing, since one of the objects of Gregory is to provide a glossy film "without the need for time-consuming and expensive buffering steps." (column 1, lines 57-58) The Examiner alleges that a buffing step can provide the heat required to soften the wax. However, Gregory does not apply any direct heating treatment (see column 8, lines 55-56), and it appears unlikely that buffing would provide a sufficiently high temperature to coalesce the particles as defined in the present application at page 31, lines 15-17, or explained more fully in lines 25-29 of the published PCT application. The heating used in the presently claimed coating serves to coalesce the wax particles. "Coalescence" is defined at page 31, lines 15-17 of the published PCT application as "the formation of a coherent phase from an incoherent phase of separate particles by fusion or growing together of the particles." There is nothing in Gregory regarding forming a coherent phase of coalesced particles.

While the Examiner notes that the compositions of Gregory can include isopropanol or butanol, it should be noted that these alcohols are included along with a polyhydroxy polyether and higher-boiling glycol (column 7, lines 45-47), which may comprise 0-10% of the composition. According to Gregory, these organic solvents aid in extending the drying time of the coating composition. In contrast thereto, the liquid phase employed in the herein claimed composition (see page 16, lines 9-12) should be based upon a liquid or a mixture of liquids in which the boiling point of the liquid phase is lower than the differential scanning calorimetry (DSC) peak melting point of the

polyolefin wax, or the differential scanning calorimetry (DSC) peak melting point of the mixture of polyolefin waxes. The purpose of the relation between the boiling and melting points is described at page 16, lines 8-11 of the published PCT application. That is, the liquid phase of the coating composition has a boiling point or a boiling point range that is less than the melting point or melting point range of the polyolefin wax of mixture of polyolefin waxes.

Thus, in summary, the claimed composition differs from that of Gregory in that it leads to coalesced wax particles, whereas Gregory describes a self-polishing wax composition that does not appear to form coalesced wax particles. The composition as claimed herein must comprise a low boiling liquid phase relative to the melting point of the wax. The presently claimed composition requires a heating step to coalesce the wax particles, whereas Gregory has no heating step, and specifically states that the composition is self-polishing, i.e., needs no buffing..

Therefore, in order to arrive at the coalesced wax particles as claimed herein. one skilled in the art would at least need to apply a heating step to a coating preparing by applying the composition of Gregory. However, Gregory does not use a heating step, and the interpretation of the Examiner that a buffing treatment may be considered equivalent to a heating treatment appears to be made only in hindsight obtained from the present invention. That is, without knowledge of the present invention, one skilled in the art would not equate the buffing treatment to a heating step. Moreover, as the Gregory composition is self-polishing, no buffing step would be required,. There is nothing in Gregory that even suggests the possibility of heating the coating material to coalesce the wax particles.

It is respectfully submitted that the coalesced wax particles on a surface and the method of treating a surface as claimed herein are non-obvious over Gregory, and withdrawal of the rejection is respectfully requested.

Claims 22, 25-27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregory in view of the admitted states of the prior art.

This rejection is respectfully traversed. As noted above, Gregory discloses an entirely different composition from that claimed herein. Gregory teaches a composition which need not be buffered, whereas the composition claimed herein requires a heating step to coalesce the wax particles. The fact that the coating is applied to a film laminated by adhesive layers or a sheet with a liner is immaterial, because there is nothing in Gregory that would lead one skilled in the art to apply the coating composition claimed herein to a film laminated with adhesive layers or to a sheet with a liner.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

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Respectfully submitted,

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